

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

1. (Currently Amended) A computer implemented method of identifying a confounder relationships between influencers and outcomes under a particular set of conditions, the method comprising the steps of:
 - building a model of information that characterizes relationships under many different conditions between influencers and outcomes;
 - storing metadata in a computer readable storage medium as a part of the model,
 - the metadata specifying,
 - whether a relationship exists between an influencer and an outcome, and
 - a characteristic of that relationship, including whether the influencer represents a confounder of the outcome;
 - inputting to a user interface a query that specifies a set of conditions;
 - determining a relationship between the set of conditions specified in the query and a particular outcome that is represented in the model; ~~and~~
 - identifying, based on the metadata of the model, at least one potential influencer of the particular outcome, and whether the potential influencer represents a confounder of the particular outcome; and
 - if the potential influencer represents a confounder of the particular outcome,
 - reporting the confounder to the user interface.
2. (Original) The method of claim 1, further comprising the step of analyzing whether the at least one influencer identified in the identifying step is expected to have a significant impact on the particular outcome.
3. (Original) The method of claim 2, further comprising the step of reporting, based on a result of the analyzing step, an expected impact.

4. (Currently Amended) The method of claim 1, further comprising the step of analyzing ~~the impact~~ the effect of the at least one influencer identified in the identifying step on the particular outcome.

5. (Original) The method of claim 4, further comprising the step of generating a modified query based on a result of the analyzing step.

6. (Original) The method of claim 1, wherein the determining step comprises a natural language recognition process.

7. (Currently Amended) The method of claim 1, wherein, in the building step, the model is built with the metadata based on at least one of computerized data analysis and opinions of human experts in a particular field.

8. (Currently Amended) A computer-implemented method of identifying relationships between influencers and outcomes under a particular set of conditions, the method comprising the steps of:

building a model of information that characterizes relationships under many different conditions between influencers and outcomes;

storing metadata in a computer readable storage medium as a part of the model, the metadata specifying,

whether a relationship exists between an influencer and an outcome, and

a characteristic of that relationship, including whether the influencer represents a confounder of the outcome;

inputting to a user interface a query that specifies a set of conditions;

determining a relationship between the set of conditions specified in the query and a particular influencer that is represented in the model;

determining a relationship between the set of conditions specified in the query and a particular outcome that is represented in the model; ~~and~~

identifying, based on the metadata of the model, at least one potential ~~influencer~~ confounder of the particular outcome, wherein the potential ~~influencer~~ confounder is unaccounted for by the query; and
reporting the confounder to the user interface.

9. (Original) The method of claim 8, further comprising the step of analyzing whether the at least one influencer identified in the identifying step is expected to have a significant impact on the particular outcome.

10. (Original) The method of claim 9, further comprising the step of reporting, based on a result of the analyzing step, an expected impact.

11. (Original) The method of claim 9, wherein the analyzing step comprises comparing a computed impact to a threshold.

12. (Original) The method of claim 8, further comprising the step of analyzing the impact of the at least one influencer identified in the identifying step on the particular outcome.

13. (Original) The method of claim 12, further comprising the step of generating a modified query based on a result of the analyzing step.

14. (Original) The method of claim 8, wherein the query inputted in the inputting step defines a relationship between an influencer and an outcome.

15. (Original) The method of claim 8, wherein each of the determining steps comprises a natural language recognition process.

16. (Currently Amended) The method of claim 8, wherein, in the building step, the model is built with the metadata based on at least one of computerized data analysis and opinions of human experts in a particular field.

17. (Currently Amended) A computer-implemented method of identifying relationships between influencers and outcomes under a particular set of conditions, the method comprising the steps of:

building a model of information that characterizes relationships under many different conditions between a plurality of nodes, wherein at least some of the nodes represent influencers and at least some of the nodes represent outcomes;

storing metadata in a computer readable storage medium as a part of the model, the metadata specifying,

whether a relationship exists between an influencer and an outcome, and a characteristic of that relationship, including whether the influencer represents a confounder of the outcome;

inputting to a user interface a query that relates to at least one of the nodes;

determining a relationship between the query and the nodes of the model; ~~and~~

identifying, based on the metadata of the model, a potential influencer of an outcome associated with the query, and whether the potential influencer represents a confounder of the outcome; and

if the potential influencer represents a confounder of the outcome, reporting the confounder to the user interface.

18. (Original) The method of claim 17, further comprising the step of analyzing- whether the potential influencer has a significant impact on the outcome associated with the query.

19. (Original) The method of claim 18, further comprising the step of reporting instances in which the potential influencer is expected to have a significant impact on the outcome associated with the query.

20. (Original) The method of claim 18, further comprising the step of generating a modified query in instances where the potential influencer has a significant impact on the outcome associated with the query.

21. (Original) The method of claim 18, wherein the analyzing step comprises comparing a computed impact to a threshold.

22. (Original) The method of claim 18, wherein the query inputted in the inputting step defines a relationship between an influencer and an outcome.

23. (Original) The method of claim 18, wherein the determining step comprises a natural language recognition process.

24. (Currently Amended) The method of claim 18, wherein, in the building step, the metadata of the model is built based on at least one of computerized data analysis and opinions of human experts in a particular field.

25. (Original) The method of claim 18, wherein the potential influencer identified in the identifying step is not represented in the query.

26. (New) The method of claim 1, wherein the metadata is stored in the computer readable storage medium comprising one of a random access memory (RAM) and a hard disk.

27. (New) The method of claim 18, wherein the metadata is stored in the computer readable storage medium comprising one of a random access memory (RAM) and a hard disk..

28. (New) The method of claim 1, wherein the metadata comprises a directed graph representation.

29. (New) The method of claim 18, wherein the metadata comprises a directed graph representation.

30. (New) The method of claim 1, wherein the metadata encodes at least one of expert domain information and statistical opinion information.

31. (New) The method of claim 18, wherein the metadata encodes at least one of expert domain information and statistical opinion information.

32. (New) The method of claim 4, wherein analyzing the effect comprises at least one of comparing distributions of probable confounders in multiple groups of conditions, employing descriptive statistics, employing graphical summaries, employing Student's t statistics, considering groups of confounders utilizing multi-way variance, and employing propensity scores.

33. (New) The method of claim 18, wherein analyzing the impact comprises at least one of comparing distributions of probable confounders in multiple groups of conditions; employing descriptive statistics, employing graphical summaries, employing Student's t statistics, considering groups of confounders utilizing multi-way variance, and employing propensity scores.